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*Original Article*

# Developing A New Composite Index of Globalization for the Indian Economy

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***Abstract:*** *Globalization is a powerful tool for bringing about a big shift in terms of the opening up of economies. It is a process of growing interdependence between economies and is a multifaceted concept encompassing economic, financial, political, technological, social, cultural, legal and environmental dimensions. Over a period of time, the Indian economy has become increasingly globalized in several dimensions. With the limited success of the planning approach, and with the built-up of adverse situations in the domestic economy and poor performance on the external front, the government introduced a gradual phase of liberalization from the mid-1980s onwards, relaxing the industrial licensing system, promoting foreign trade, and permitting equity capital investment, while relaxing exchange controls and restrictions. Under the compulsions arising out of the balance of payments crisis in 1990-91, the government adopted the policy of liberalization, globalization, and privatization, shaping the economy after that. While many sectoral studies have been undertaken, few studies were found that carried out a macroeconomy-level analysis of the extent and depth of globalization of the Indian economy over three decades since reforms were initiated. The present study attempted to gauge the globalization of the Indian economy in its varied dimensions using the methodology of a composite index developed by KOF. The index comprised 31 indicators across different dimensions of globalization. Principal component analysis was used to weigh the indicators and aggregate the composite index of globalization.*

***Keywords:*** *Globalization Index, Economic Globalization, Financial Globalization, Political Globalization, Technological Globalization, Social Globalization.*

## I. INTRODUCTION

Globalization is a term that is as old as the evolution of mankind, but the term has been in use since the 1980s. Under the race of growth, globalization is driven by the divergence of cultural, political, economic, financial, ecological, technological, and social well-being of a country and manages to create investment opportunities, higher productivity, resource allocation, trade, technology transfer, and more integration among economies with greater efficiency.

Globalization makes a country move from a traditional wave to a modern wave. The benefits of globalization cover different areas of the world. It developed economies, increased cultural exchange, changed the management of work, increased competition, reduced geographic distances, increased financial exchange between companies, and provided financial aid to countries. The waves of globalization were felt in India years ago in the wake of civilization. However, the popular use of the term globalization in the Indian context came about during the Indian economic crises in 1990-91, when India initiated the economic liberalization plans with the LPG model.

This paper is an attempt to quantitatively assess the extent of global integration in India by constructing an index based on globalization. The index is aimed at bringing together the diverse nature of globalization in terms of five dimensions, economic, political, financial, technological, and social, captured through 31 indicators for the Indian economy over the period from 1990-91 to 2019-20. In the paper, section II reviews the related literature on the evolution of the index, section III discusses the construction of the globalization index, section IV empirically presents the statistical results, and section V gives the conclusion.

## II. LITERATURE REVIEW

Scholars actively tried to develop globalization indices since the 2000s. The first index of globalization developed by A T Kearney (2001) was based on 14 variables on economic integration, personal contact, technology and political engagement. Almost simultaneously, the KOF globalization index was developed in 2002 using 23 variables, which was updated by Dreher (2006). Dreher et al. (2008) further revisited the KOF globalization index using 43 variables. The Centre for the Study of Globalisation and Regionalisation (CSGR) constructed the CSGR index on globalization based on 16 variables measuring the economic, social and political dimensions of globalization **(Lockwood and Redoano 2005)**. The Maastricht globalization

index was first developed by **Martens and Zywietz(2006)** and was revisited by **Figge and Martens (2014)** to include the environmental dimension. They extend the coverage to cultural, technological and environmental dimensions. Ecological footprints of imports and exports as a share of biocapacity are used as environmental dimension indicators. They also report increased globalization over time across countries. **Kluver and Fu (2004)** developed the Cultural Globalization Index, which was redeveloped by **Raab et al. (2008)** by including a social dimension. **Vujakovic (2010)** introduced the New Globalization Index (NGI) by distinguishing globalization from regionalization. **Ghemawat and Altman (2016)** distinguished the variables on a depth and breadth basis in the DHL (global) connectedness index. These indices differ in the number of countries included, the indicators used, and the weightage scheme adopted. A recurring observation in these rankings is that European nations rank highest when it comes to globalization.

**Dreher (2006)** has used economic, social, and political integration dimensions to develop the index of globalization. He has used Actual Flows and Restrictions as indicators for the economic integration dimension. Under Actual Flows, the indicators range from those of trade and investment to income payments to foreign nationals, all taken as ratios to GDP. The mean tariff rate, levies on trade between nations, and hidden import obstacles were used to define restrictions (in the percentage of current revenue) and capital account restrictions. He has used data on the political engagement dimension, represented by indicators such as Embassies in the country, Membership in international organizations, and Participation in UN Security Council missions. Social globalization was captured by data on personal contact, information flows and cultural proximity. The sub-indicators for these included outgoing telephone traffic, transfers (in the percentage of GDP), international tourism, average costs of telephone calls to the USA, foreign population (in the percentage of the total population), telephone mainlines (per 1000 people), internet hosts (per capita), internet users (as a share of population), cable television (per 1000 people), daily newspapers (per 1000 people) and radios (per 1000 people); thirdly, number of McDonald's restaurants (per capita) for cultural proximity. He has used panel data for a period from 1970-2000 for 123 countries and analyzed each indicator. **Dreher (2008)** revisited the index and included 20 more variables in the earlier composite index. In another study, **Gygli et al. (2019)** revised **Dreher (2006)** and **Dreher (2008)** to construct the composite KOF globalization index based on the economic, political, and social dimensions.

Several studies have constructed indices of globalization, differing to some degree in the dimensions and indicators used, the number of countries covered and the period of study. **Bo & Pau (2008),** for instance, have measured economic integration using a composite index for 17 countries in the Asia-Pacific region for the period 1990 to 2005. They have used economic convergence, trade share, FDI flow share and international tourist share as four dimensions, represented by diverse indicators such as economic and demographic variables of the economy, import and export ratios, foreign investment and inter and intra-regional flow of tourists. The findings of the convergence index show that Hong Kong and Singapore were the most integrated, and China and Indonesia were the least integrated economies.

**Ghemawat & Altman (2016)** have developed a globalization index based on the depth and breadth of countries' integration with the rest of the world. Trade, capital, information and people as dimensions are used for constructing the globalization breadth index. Trade, capital, information and people are also used to construct the depth index of globalization.

**Huh, & Park (2019)** differ in the new composite index of globalization they constructed and use it to evaluate the effects of globalization on economic growth and income equality in 158 economies for the years 2006 to 2014. The new globalization index has two sub-components: Intraregional economic integration index and the extra-regional economic integration index, covering areas of trade, investment, money and finance, infrastructure, international taxation, remittances and movement of people. The paper examines the relative strength of intra- and extra-regional economic integration with that of all trading partners' averages. They find that while globalization has increased, it has worsened income equality.

**Carveth et al. (2019)** have developed a similar index for economic openness for 157 countries but with additional dimensions of enterprise conditions, represented by domestic market contestability, environment for business creation, apart from other measures commonly used for business environment, and governance, represented by executive limitations, legality, political responsibility, integrity of governance, efficacy of government, and quality of regulations.

**Altman & Bastian (2021)** have constructed a connectedness index based on trade, capital, information, and people development in the COVID-19 crisis. Depth and breadth measures of trade, capital, information, and people have been used. Where the depth measure compares cross-border flow to domestic flow, and breadth measures the extent to which flows are distributed around the international markets. **Sun et al. (2022)** have constructed a globalization barometer for analyzing the trend of globalization for 142 countries from 2000 to 2020 based on economic, social and political dimensions. To gain a more precise understanding of the level of globalization, the study divides the globalization factors into de facto and de-jure categories.

## III. MEASURING GLOBALIZATION

In view of the review of literature, the present study attempts to construct a composite index of globalization for India using a multidimensional approach. Appropriate modifications have been made to the approaches found in the related. The construction of the index is described in four steps as follows.

### *A) Index Composition*

The index is composed of 31 variables that measure five dimensions of globalization in India, namely, economic, financial, political, technological, and social. Table 1 represents the dimensions and indicators used in the index.

**Table 1: Composition of Globalization Index**

| Dimension | Indicators | Definition |
|---|---|---|
| Economic Globalization | Export of Service to GDP | Trade in services as a sum of exports and imports as a proportion of GDP. |
| | Import of Service to GDP | Export of services as a proportion of GDP |
| | Total Trade in Service to GDP | Imports of services as a percentage of GDP |
| | Trade to GDP | Trade is the sum of exports and imports as a proportion of GDP. |
| | Export to GDP | Exports as a proportion of GDP |
| | Import to GDP | Imports as a proportion of GDP |
| | Import Duties to Imports | Import and other customs duties as a proportion of imports. |
| | Import Penetration | Degree domestic demand (D) is satisfied by imports (M). |
| | Revealed Comparative Advantage of Services | The ratio of two shares is the definition of the RCA index. The percentage of a nation's overall exports of the relevant commodity that makes up the numerator is that percentage. The percentage of a commodity's global exports that are made globally is the denominator. |
| | India's Trade to World Trade | India's export and imports of Goods and services share in the world's import and export of goods and services. |
| Financial Globalization | FDI+FII to GDP | Inflows and outflows of FDI and FII as a proportion of GDP. |
| | FDI Inflow to Gross Fixed Capital Formation | FDI inflow to Gross Fixed Capital Formation. |
| | FDI to GDP | Inflows plus outflows of Foreign Direct Investment as a proportion of GDP. |
| | FII to GDP | Inflows plus outflows of Portfolio Investments as a proportion of GDP. |
| | Foreign Debt to GDP | The ratio between a country's debt and its Gross Domestic Product. |
| | Foreign Exchange Reserve to Imports | The ratio of Foreign Exchange Reserves to Imports. |
| | Sectoral FDI | Sectoral Foreign Direct Investment openness. |
| Political Globalization | Trade Agreement with Member Countries | The sum of exports and imports with trade agreement member countries to total trade. |
| | Participation in United Nations Peace-Making Agreements | Number of United Nations peacekeeping operations in which the country participates. |
| | Membership in Foreign Organizations | Number of memberships of international organizations. |
| | Participation in Trade Agreements | Number of trade agreements |

| | | |
|---|---|---|
| Technological Globalization | Research and Development Expenditure to GDP | Gross domestic expenditures on Research and Development (R&D), are expressed as a percent of GDP. |
| | Global Commodities as a Percentage of Population | Global commodity stores in India have a share of the total population. |
| | Mobile Subscription Per 100 Person | All mobile subscriptions are divided by the total population of the nation and increased by 100 to get the mobile cellular subscribers (per 100 persons) indicator. |
| | Patent Application by Non-Resident to Total Population | Number of patent applications by non-residents in India as a share of the total population. |
| Social Globalization | Remittance to GDP | Remittances from migrants are calculated as the total of employee remittances, wages for workers, and migrant contributions. The ratio of total remittances to total GDP. |
| | Foreign Exchange Earnings from Tourists to Foreign Exchange Reserve | Foreign exchange earnings received from tourists as a share of foreign exchange reserve. |
| | Students Going Abroad to Enrolment in HSC | Students are going abroad as a proportion of Enrollment of students in HSC. |
| | Work Permits Abroad to Total Population (age 15-64) | Working Population abroad as a share to working age group from 15-64. |
| | Inbound and Outbound of Tourists to Total Population | Inbound and outbound tourists have a share of the total population. |
| | Students Coming to India to Enrolment in Higher Education | Students are coming to India as a share of total student enrollment in higher education. |

***Source:*** *Author's Compilation*

### *B) Imputation of Missing Data*

The index is calculated for a period of 30 years, from 1990 to 2020, for different dimensions of globalization. However, not all variables are available for all years. Missing observations in the series are extracted using interpolation. Interpolation is a method used to estimate data between two known values. Interpolation is done through linear interpolation in SPSS.

### *C) Normalization of the Data*

The indicators convey different information and have different units and scales, making them incomparable; therefore, they cannot form a composite index directly. To combine the data in a meaningful way the process of normalization is done. It involves transforming the data into an index with a scale from one to hundred. Normalization can be done using z score, min-max, re-scaling, etc. In the present study, the data is first processed using the normalized max-min method. The formula for the same is shown as (1).

$$Z_i = \frac{X_i - min(x)}{max(x) - min(x)} \times 100 \ldots\ldots\ldots\ldots\ldots (1)$$

$where,$
$Z_i = i^{th} normalized\ value\ in\ the\ data\ set$
$X_i = i^{th} value\ in\ the\ data\ set$
$min(x) = minimum\ value\ in\ the\ data\ set$
$max(x) = maximum\ value\ in\ the\ data\ set$

Normalization will convert the data values between 0 and 100, such that $0 \leq z_i \geq 100$, where one hundred represents the highest value across the variables and zero represents the worst situation. The year whose value is derived as the minimum will have zero as the index value, and the year whose value is derived as the maximum will have 100 as the index value. In this manner, the globalization index is dynamic as the value for minimum and maximum can change according to the period and according to the type of study.

***D) Assigning Weights***

The next step is to assign weights to the variables. This will allow the effect or importance of each indicator to be adjusted. Weights can be assigned by following the subjective method, where the researcher assigns the weight based on their own belief of the important variable. This method was used in the A T Kearney Globalization Index. The second method is obtaining statistically optimal weights using the Principal Component Analysis (PCA)/Factor Analysis, Data Envelopment Analysis (DEA), Regression Analysis, etc. In this paper, PCA has been used to avoid subjectivity bias.

***E) Aggregation to Indices***

Once the weights are obtained, the composite index of globalization can be calculated as the weighted average of all the indicators. The raw values of indicators are multiplied by their respective weights and then aggregated. This weighted aggregate is then divided by the total weight to obtain the weighted mean. The formula used for weighted mean is as under:

$$\text{Sub-Index} = \frac{\sum x_i \times w_i}{\sum w_i} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(2)$$

$where,$
$x_i = raw\ value\ of\ the\ indicator$
$w_i = weight\ attributed\ to\ the\ \ indicator$

***F) Normalizing the Composite Index***

The last step is to normalize the weighted mean by following the min-max method of normalization. Therefore, the final composite index value will again be interpreted from zero to 100, where zero implies the lowest level of globalization and 100 implies the highest degree of globalization within the time series.

## IV. A NEW COMPOSITE GLOBALIZATION INDEX

The Globalization index is calculated using the procedure discussed above. The technique of PCA dimensionally reduces the statistical information of the indicators by preserving as much information as possible. It identifies the components, that is, the various indicators, which hold the maximum information for the composite index. It is reflected in eigenvalues, which represent the overall variance that a major component may account for. Those components having eigenvalue greater than 1, and which explain the total variance in globalization by at least ten percent and cumulatively, more than 60 percent are taken into account.

Table 2 shows the principal components which hold the information about the indicators of globalization. The initial eigenvalues show that four components are identified. The first component explains 72.13 percent variance in globalization, followed by the second component, which explains 10.06 percent variance; the third component explains 5.95 percent variance, and the fourth principal component explains 4.13 percent variance. These components together explain a 92.28 percent variance in overall globalization.

**Table 2: Overall Globalization Total Variance Explained**

| Components | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | % of variance | Cumulative % | Total | % of variance | Cumulative % | Total | % of variance | Cumulative % |
| 1 | 22.360 | 72.130 | 72.130 | 22.360 | 72.130 | 72.130 | 17.965 | 57.952 | 57.952 |
| 2 | 3.119 | 10.060 | 82.190 | 3.119 | 10.060 | 82.190 | 5.779 | 18.641 | 76.594 |
| 3 | 1.846 | 5.956 | 88.146 | 1.846 | 5.956 | 88.146 | 3.242 | 10.460 | 87.053 |
| 4 | 1.282 | 4.136 | 92.282 | 1.282 | 4.136 | 92.282 | 1.621 | 5.229 | 92.282 |
| Extraction Method: Principal Component Analysis. | | | | | | | | | |

***Source:*** *Authors' Computations*

The extracted sum of square loading in Table 2 shows the total variance, that is, the cumulative variance of 92.282 percent, which is explained by the four principal components of extraction. The rotation sum of square loadings is the eigenvalues derived after the rotation of components. Rotation changes the variance explained by the components. It can be seen in Table 2 that the first principal component now explains 57.952 percent of the variance in globalization, while the

second component explains 18.641 percent. The variance explained by the third and fourth components has increased to 10.46 percent and 5.229 percent, respectively, after rotation. Together, they explain, cumulatively, 92.282 percent of the variance.

Table 3 presents coefficients of correlation between the indicators and the four principal components. The matrix explains the importance of the principal components based on the correlation coefficient values. The PCA technique ignores indicators which have correlation coefficients lower than plus/minus 0.5. The indicators which have a high correlation with the particular principal component, have been highlighted by shaded boxes in the table. It is found that there is a high positive correlation of indicators such as import, export and total trade ratios in goods and services, and in services, in particular, with the principal component I. Import duties as a ratio to imports are found to have a strong negative correlation with the first principal component, the negative value being justified by the nature of the indicator. Other indicators related to economic globalization that have a high positive correlation with the first component include import penetration in domestic demand and revealed comparative advantages in services. The indicator, India's share in world trade, has a moderately positive correlation. The majority of the indicators related to foreign investment and debt are found to have a strong positive association with the first component.

All indicators of political and technological globalization have a positive correlation with the first component. There are mixed findings with respect to the correlation between the first principal component and the indicators of social globalization. Some of the indicators have a high positive correlation, while some have a correlation of less than 0.5 and are therefore ignored by the PCA technique. There are very few indicators bearing a high correlation with principal components 2, 3 and 4, which is also reflected in the low eigenvalue they bear.

**Table 3: Component Matrix**

| Indicators | Components | | | |
|---|---|---|---|---|
| | 1 | 2 | 3 | 4 |
| Export of Service to GDP | 0.990 | 0.059 | 0.049 | 0.023 |
| Import of Service to GDP | 0.987 | 0.005 | 0.042 | -0.058 |
| Total Trade in Service to GDP | 0.992 | 0.041 | 0.047 | -0.005 |
| Trade to GDP | 0.967 | 0.119 | 0.154 | 0.049 |
| Export to GDP | 0.969 | 0.127 | 0.118 | 0.061 |
| Import to GDP | 0.964 | 0.114 | 0.175 | 0.041 |
| Import Duties to Imports | -0.707 | 0.522 | 0.055 | 0.130 |
| Import Penetration | 0.923 | -0.191 | 0.279 | 0.075 |
| Revealed Comparative Advantage of Services | 0.779 | -0.477 | 0.024 | -0.076 |
| India's Trade to World Trade | 0.597 | -0.334 | 0.613 | 0.073 |
| FDI+FII to GDP | 0.768 | 0.172 | -0.429 | 0.421 |
| FDI Inflow to Gross Fixed Capital Formation | 0.935 | -0.027 | 0.097 | 0.001 |
| FDI to GDP | 0.917 | 0.246 | -0.075 | 0.019 |
| FII to GDP | 0.188 | -0.007 | -0.629 | 0.682 |
| Foreign Debt to GDP | 0.891 | 0.417 | -0.039 | 0.016 |
| Foreign Exchange Reserve to Imports | 0.215 | -0.754 | -0.384 | 0.050 |
| Sectoral FDI | 0.763 | 0.408 | -0.325 | -0.285 |
| Trade Agreement with Member Countries | 0.957 | 0.277 | 0.012 | -0.020 |
| Participation in United Nations Peace-Making Agreements | 0.946 | -0.272 | -0.091 | 0.009 |

| | | | | |
|---|---|---|---|---|
| Membership in Foreign Organizations | 0.983 | -0.094 | -0.092 | -0.098 |
| Participation in Trade Agreements | 0.986 | -0.040 | 0.118 | 0.033 |
| Research and Development Expenditure to GDP | 0.931 | 0.005 | -0.017 | -0.055 |
| Global Commodities as a Percentage of Population | 0.905 | 0.277 | -0.252 | -0.127 |
| Mobile Subscription Per 100 Person | 0.925 | 0.341 | 0.031 | -0.075 |
| Patent Application by Non-Resident to Total Population | 0.965 | 0.142 | -0.018 | 0.002 |
| Remittance to GDP | 0.977 | 0.033 | 0.065 | 0.020 |
| Foreign Exchange Earnings from Tourists to Foreign Exchange Reserve | -0.665 | 0.682 | 0.143 | -0.014 |
| Students Going Abroad to Enrolment in HSC | 0.851 | -0.360 | -0.144 | -0.168 |
| Work Permits Abroad to Total Population (age 15-64) | 0.423 | -0.165 | 0.522 | 0.620 |
| Inbound and Outbound of Tourists to Total Population | 0.949 | 0.244 | -0.103 | -0.118 |
| Students Coming to India to Enrolment in Higher Education | -0.340 | 0.604 | 0.204 | 0.217 |
| Extraction Method: Principal Component Analysis | | | | |

***Source:*** *Authors' Computations*

The Component Score Coefficients in Table 4 are the weights assigned to each indicator of globalization, which are then multiplied by the year-wise original values of the indicators. Subsequently, these values are aggregated using the weighted mean technique explained above. The weights are derived on the basis of the correlation matrix. The weights used in further steps would be those indicators which are identified under the respective principal components based on their correlation values.

**Table 4: Component Score Coefficient Matrix**

| Indicators | Scores |
|---|---|
| Export of Service to GDP | 0.043 |
| Import of Service to GDP | 0.045 |
| Total Trade in Service to GDP | 0.044 |
| Trade to GDP | 0.044 |
| Export to GDP | 0.045 |
| Import to GDP | 0.044 |
| Import Duties to Imports | 0.029 |
| Import Penetration | -0.009 |
| Revealed Comparative Advantage of Services | -0.029 |
| India's Trade to World Trade | 0.308 |
| FDI+FII to GDP | 0.017 |
| FDI Inflow to Gross Fixed Capital Formation | 0.030 |
| FDI to GDP | 0.071 |
| FII to GDP | 0.626 |
| Foreign Debt to GDP | 0.094 |

| | |
|---|---|
| Foreign Exchange Reserve to Imports | 0.259 |
| Sectoral FDI | 0.133 |
| Trade Agreement with Member Countries | 0.079 |
| Participation in United Nations Peace-Making Agreements | 0.000 |
| Membership in Foreign Organizations | 0.040 |
| Participation in Trade Agreements | 0.025 |
| Research and Development Expenditure to GDP | 0.045 |
| Global Commodities as a Percentage of Population | 0.099 |
| Mobile Subscription Per 100 Person | 0.093 |
| Patent Application by Non-Resident to Total Population | 0.059 |
| Remittance to GDP | 0.039 |
| Foreign Exchange Earnings from Tourists to Foreign Exchange Reserve | -0.218 |
| Students Going Abroad to Enrolment in HSC | 0.007 |
| Work Permits Abroad to Total Population (age 15-64) | 0.195 |
| Inbound and Outbound of Tourists to Total Population | 0.090 |
| Students Coming to India to Enrolment in Higher Education | -0.236 |

***Source:*** *Authors' Computations*

The overall globalization level in India, comprising all five dimensions, has changed over time with an upward trend, although, in the first half of the study period, there are fluctuations observed in the index as depicted in Fig. 1. The trend is a reflection of the underlying changes in various dimensions of globalization. The lower values of the index and the fluctuations therein may be attributed to the largely stagnant values of technological globalization and the fluctuations in the values of financial globalization. With restrictions on trade and foreign investments in the initial phase of reforms, characterized by a gradual and cautious approach to opening up the economy, the level of overall globalization is found to be very low, between seven and 15 percent in terms of the index values. The fluctuations in the index values also indicate a lack of consistent outcomes of the policies of liberalization and globalization adopted for various sectors in India and the time lag in the impact to be felt. However, despite the low levels, the index value doubled in the first decade of the study period, registering a CAGR of 8.84 percent (Fig. 1).

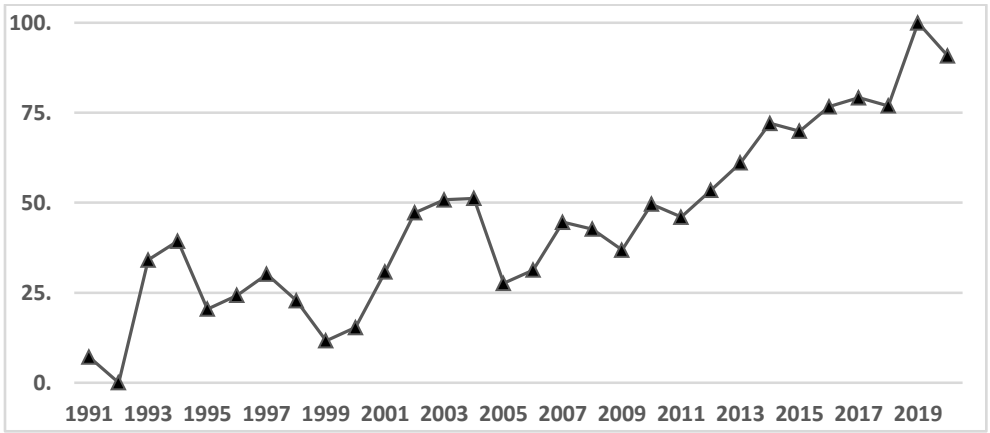


**Figure 1: Composite Index of Globalization of India**

***Source:*** *Authors' Work*

With the cumulative impact of reforms and the reinforcing inter-connectedness of various dimensions of globalization, the second decade witnessed a rapid increase in overall globalization in India. This is evident in the upward of 40 percent increase in the CAGR to 12.47 percent. The level of overall globalization has also increased much more in the second decade; in the first decade, the level doubled from its initial value, whereas, in the second decade, the end value increased more than thrice compared to the value at the beginning of the second decade. Notwithstanding these improvements, events like the global financial crises, H1B visa crises, Gulf-region job crises, volatility in world stock markets and the GDP rates of economies, inflation, and recession have dented the upward trend in the globalization index of India. The third decade again witnessed a doubling of the index value from around 50 percent to 100 percent, although there was a ten percent decline in the last year, 2019-20, with the onslaught of the Covid-19 pandemic towards the end of the year 2019. The downturn was particularly in the social and political dimensions.

**Table 5: Growth in Composite Index of Globalization**

| Period | CAGR |
|---|---|
| 1990-91 to 1999-2000 | 8.84 |
| 1999-00 to 2009-10 | 12.47 |
| 2009-10 to 2019-20 | 6.22 |
| 1990-91 to 2019-20 | 9.20 |

***Source:*** *Authors' Computations*

## V. CONCLUSION

The globalization index of India shows an overall improvement throughout the years since the reform was initiated in 1991. The highest level of globalization in India is found in the indicators of financial globalization, followed by technological globalization, social globalization, economic globalization, and political globalization. The index has a reasonably high CAGR of 9.20 percent over the study period. It may be borne in mind that there are many more dimensions and their indicators to reflect globalization which are not included in the present study due to the non-availability of data for the entire period, such as cultural, environmental, interpersonal, etc. Although there is secular growth in globalization in India, several other countries such as China, Russia, South Africa, Israel, and almost all developed countries exhibit a much higher level of globalization, as found in the 2018 Globalization Report (Weib, Sachs & Weinelt, 2018). This suggests that there is a good scope for India to deepen and broaden the level of globalization across various dimensions.

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